



Stantec

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**Final Report: Environmental
Assessment Registration for
Mulgrave Quarry Fines Storage
Development**

Martin Marietta Materials
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Route 344, Auld's Cove
B0E 2G0

File: 121510166

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Table of Contents

1.0 PROPONENT AND PROJECT IDENTIFICATION.....	1.0
1.1 PROPONENT INFORMATION	1.0
1.2 PROJECT INFORMATION	1.0
2.0 PROJECT INFORMATION.....	2.0
2.1 DESCRIPTION OF THE UNDERTAKING	2.0
2.2 GEOGRAPHIC SETTING	2.2
2.3 PROJECT COMPONENTS	2.4
2.4 SITE PREPARATION AND CONSTRUCTION.....	2.5
2.5 OPERATION AND MAINTENANCE	2.6
2.6 EFFLUENTS AND EMISSIONS	2.6
2.7 DECOMMISSIONING AND RECLAMATION	2.8
3.0 SCOPE	3.0
3.1 SCOPE OF THE UNDERTAKING	3.0
3.2 PURPOSE AND NEED FOR THE UNDERTAKING.....	3.0
3.3 PROJECT ALTERNATIVES	3.0
3.4 SCOPE OF THE ENVIRONMENTAL ASSESSMENT.....	3.1
4.0 PUBLIC INVOLVEMENT.....	4.0
4.1 METHODS OF INVOLVEMENT	4.0
4.2 STAKEHOLDER COMMENTS AND STEPS TAKEN TO ADDRESS ISSUES	4.0
5.0 VALUED ENVIRONMENTAL COMPONENTS AND EFFECTS MANAGEMENT	5.0
5.1 ASSESSMENT METHODS	5.0
5.2 SURFACE WATER RESOURCES	5.0
5.2.1 Description of Existing Conditions	5.1
5.2.2 Potential Effects, Proposed Mitigation, Monitoring and Follow-up.....	5.9
5.3 RARE AND SENSITIVE FLORA.....	5.10
5.3.1 Description of Existing Conditions	5.10
5.3.2 Potential Effects, Proposed Mitigation, Monitoring and Follow-up.....	5.15
5.4 WILDLIFE	5.16
5.4.1 Description of Existing Conditions	5.16
5.4.2 Potential Effects, Proposed Mitigation, Monitoring and Follow-up.....	5.21
5.5 WETLANDS	5.21
5.5.1 Description of Existing Conditions	5.21
5.5.2 Potential Effects, Proposed Mitigation, Monitoring and Follow-up.....	5.28
5.6 GROUNDWATER RESOURCES	5.29
5.6.1 Description of Existing Conditions	5.29
5.6.2 Potential Effects, Proposed Mitigation, Monitoring and Follow-up.....	5.37
5.7 ARCHAEOLOGICAL AND HERITAGE RESOURCES	5.41
5.7.1 Description of the Existing Environment	5.41
5.7.2 Potential Effects, Proposed Mitigation, Monitoring and Follow-up.....	5.42

5.8	AIR QUALITY.....	5.42
5.8.1	Description of Existing Conditions	5.42
5.8.2	Potential Effects, Proposed Mitigation, Monitoring and Follow-up.....	5.45
5.9	SOCIO-ECONOMIC ENVIRONMENT	5.45
5.9.1	Description of the Existing Environment	5.45
5.9.2	Potential Effects, Proposed Mitigation, Monitoring and Follow-up.....	5.48
5.10	OTHER UNDERTAKINGS IN THE AREA	5.50
5.10.1	Description of the Existing Environment	5.50
5.10.2	Potential Effects, Proposed Mitigation, Monitoring and Follow-up.....	5.50
6.0	EFFECTS OF THE PROJECT ON THE ENVIRONMENT	6.0
7.0	EFFECTS OF THE ENVIRONMENT ON THE PROJECT	7.0
8.0	OTHER APPROVALS REQUIRED	8.0
9.0	FUNDING.....	9.0
10.0	ADDITIONAL INFORMATION	10.0
11.0	LITERATURE CITED	11.0
12.0	APPENDICES.....	12.0

LIST OF APPENDICES

APPENDIX A	Registry of Joint Stocks and Industrial Approval
APPENDIX B	MSDS Sheet
APPENDIX C	Government Comments Draft EA - Disposition Table
APPENDIX D	Project Information Bulletin and Letters
APPENDIX E	Freshwater Chemistry Analysis and Aquatic Photo Appendix
APPENDIX F	Vascular Plants Recorded in Study Area
APPENDIX G	Breeding and Population Status of Birds Recorded in the Project Area and the Breeding Bird Atlas Square
APPENDIX H	Plant and Bird Species Recorded by Wetland
APPENDIX I	Fines Leachate Analysis

LIST OF TABLES

Table 5.1	Summary of Stream Assessments	5.6
Table 5.2	Wetlands within Project area and information on their type, area, plant richness, and likely Project effects	5.22
Table 5.3	Summary of Available Domestic Water Well Records within 800 m of the Project	5.36
Table 5.4	Nova Scotia Air Quality Regulations (<i>Environment Act</i>) and <i>Canadian Environmental Protection Act</i> Ambient Air Quality Objectives.....	5.44

LIST OF FIGURES

Figure 1	Project Location.....	2.1
Figure 2	Land Classification	2.3
Figure 3	Environmentally Sensitive Areas	5.2
Figure 4	Surficial and Bedrock Geology	5.32
Figure 5	Water Supplies within 800 metres	5.35

1.0 PROPONENT AND PROJECT IDENTIFICATION

1.1 PROPONENT INFORMATION

Name of the Proponent: Martin Marietta Materials Limited
Postal Address: P.O. Box 278
Route 344, Auld's Cove
Mulgrave, NS B0E 2G0
Tel.: (902) 747-2882
Fax: (902) 747-2396

Registry of Joint Stocks for the proponent company is included in Appendix A.

Company President and/or Environmental Assessment Contact

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Official Title: Plant Manager
Address: As Above
Tel.: (902) 747-2882
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Environmental Consultant Contact

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Signature of Plant Manager

1-19-10

Date

1.2 PROJECT INFORMATION

Name of the Undertaking: Mulgrave Quarry Fines Storage Project
Location of the Undertaking: Mulgrave, Guysborough County, NS

2.0 PROJECT INFORMATION

2.1 DESCRIPTION OF THE UNDERTAKING

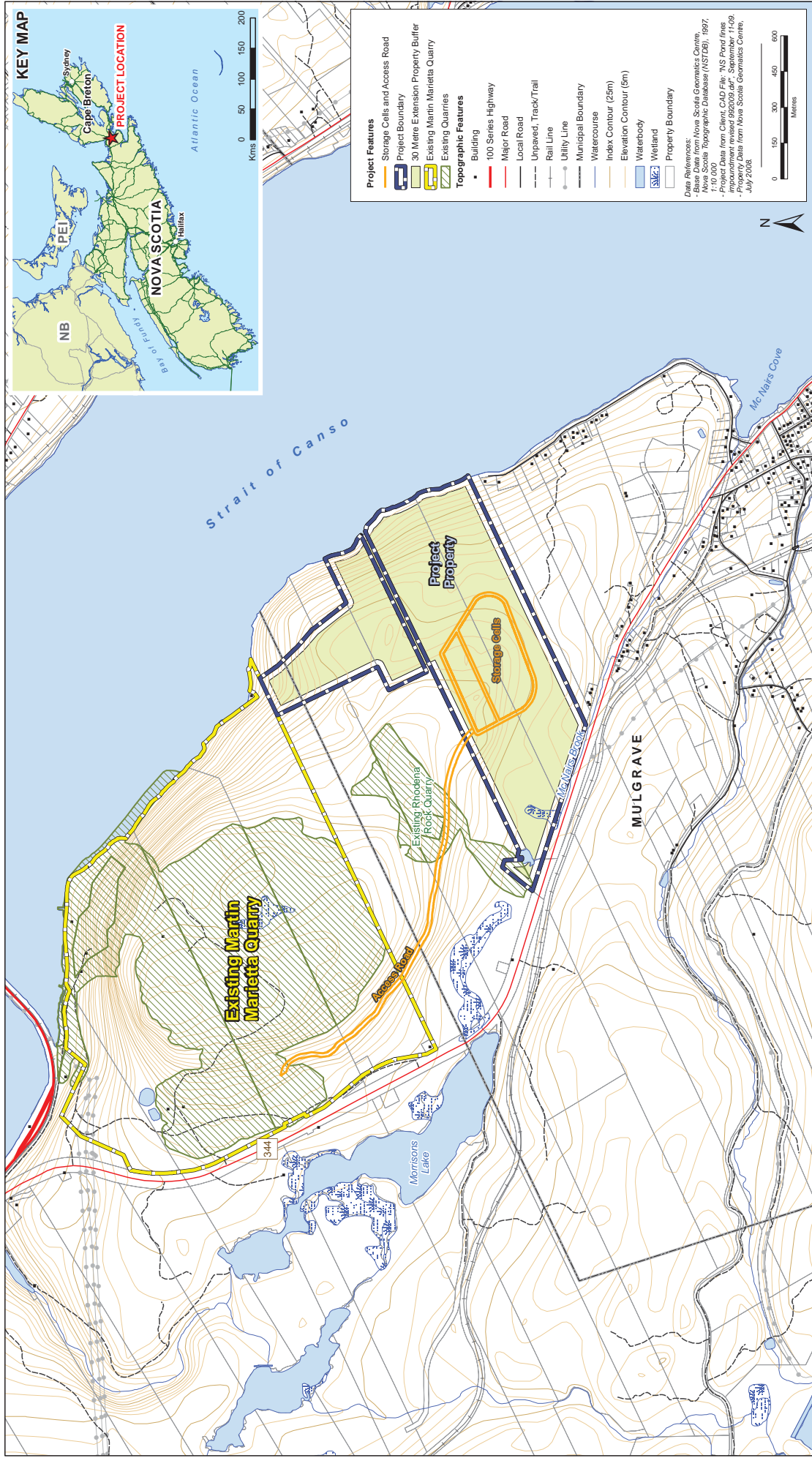
Martin Marietta Materials Limited (Martin Marietta; the Proponent) owns and operates the Mulgrave Quarry, located in Mulgrave, Guysborough County, Nova Scotia (Figure 1). The quarry property is in the Mulgrave municipal district. It is currently operating under an Industrial Approval (Approval No. 2000-016493) that was obtained from Nova Scotia Environment (NSE), pursuant to Division V of the Activities Designation Regulations (Nova Scotia Environment Act). The current Approval is effective from 2000 until December 31, 2010. A copy of the Approval permit is appended to this report (Appendix A).

Martin Marietta proposes to modify its quarry operation to allow for continual storage of fines produced during the washing of aggregate. The Proponent owns the existing quarry lands as well as the additional parcels of land proposed for the Project, which will effectively allow for development of the fines storage cells. The quarry modification on the new lands will include activities related to fines storage only and will not be operated for purposes of rock extraction (*i.e.*, drilling, blasting and crushing) at that site.

The current quarry operation includes an area of approximately 123 hectares (ha) (Figure 1). The proposed Project will incorporate an additional 90 ha of lands for a total size of approximately 213 ha. To date approximately 70,000,000 tonnes of aggregate have been processed since the facility opened in 1978 and an estimated two hundred and fifty million rock reserve remains on the existing site. The annual production rate at the existing facility is approximately 5,000,000 tonnes of granite per year. Most of the aggregate is removed from site by ship for export to Florida, South Carolina, Georgia and P.E.I, with lesser amounts taken by truck for local construction, such as road building. The existing quarry operates on a schedule of 24 hours per day, seven days a week, 52 weeks a year, although level of activity varies according to market demand. As the anticipated Project area will not be used for quarry development there will be no change in the facility's annual production or operating schedule.

Approximately 30,000 tonnes of fines will be stored per month at the proposed Project site in an engineered series of storage cells that will be designed to manage environmental issues such as site runoff. The proposed Project will also involve the construction of a 1.8 km access road, connecting the existing quarry site to the proposed fines storage property (Figure 1) through an easement obtained from the operator of the intervening quarry lands (Rhodena Rock Limited).

As a result of field and desktop studies undertaken in support of this environmental registration document, location and design of the fines storage cells has been carefully considered to minimize potential adverse environmental effects (*e.g.*, wetland and watercourse impacts) on the proposed Project site.



DATE: 21/09/2009
 PREPARED BY: L. Kendall
 PROJECT NO.: 1050893

MARTIN MARIETTA MATERIALS - MULGRAVE QUARRY FINES STORAGE PROJECT

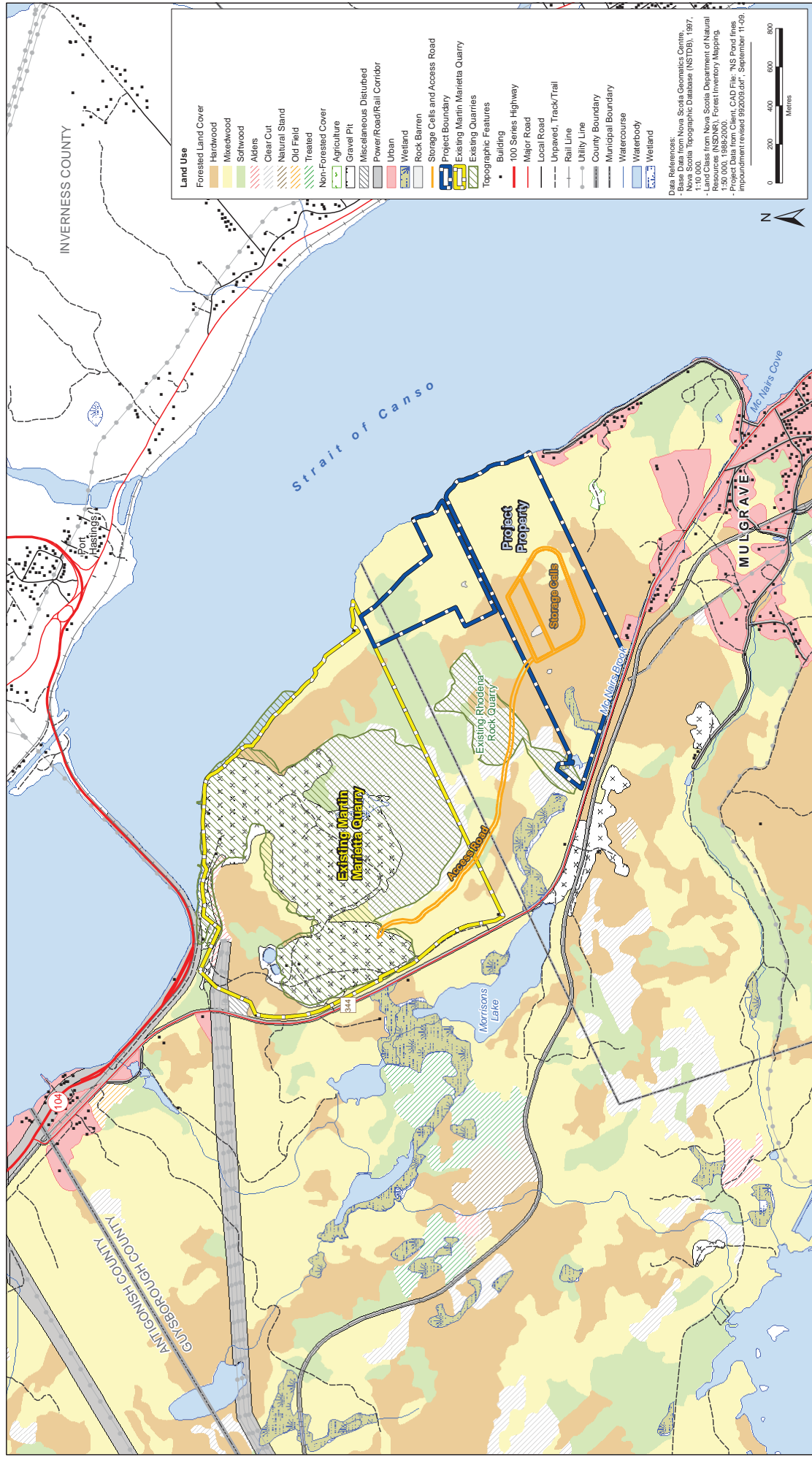
PROJECT LOCATION

FIGURE NO.: **Figure 1**

2.2 GEOGRAPHIC SETTING

Mulgrave Quarry is located just outside the small community of Mulgrave, Guysborough County, Nova Scotia (Figure 1). It includes Porcupine Mountain along route 344. Entrance to the quarry is via a private access road located off route 344. The quarry and proposed quarry fines storage area are situated on lands that are owned by the Proponent. The proposed Project site supports a number of habitat types including hardwoods, mixedwoods, barrens, and wetlands (Figure 2). Generally, the proposed fines storage land is bound to the north by lands owned by Rhodena Rock Limited, with an operational quarry to the northwest.

Mature stands of second growth hardwood provide cover over much of the property, particularly the large hill in the center of the Project area and its south-facing slopes. These mesic stands are dominated by a mixture of red maple (*Acer rubrum*), yellow birch (*Betula allegheniensis*), paper birch (*Betula papyrifera*), and American beech (*Fagus grandiflora*). Mature second growth mixedwood forest is particularly prominent within the northern parcel of the property and throughout the lower slopes. These mesic mixedwood stands are composed of a combination of red maple, balsam fir (*Abies balsamea*), yellow birch, paper birch, white spruce, and red spruce (*Picea rubens*). These tree species also contribute to a moderate shrub layer throughout the mixedwood forest. The Project area also supports several stands of conifer-dominated forest. The center of the property supports patches of barrens habitat where areas of bedrock outcropping are located at the tops of hills and ridges. The barrens habitat is characterized by dense low-lying coverage of ericaceous shrubs, exposed bedrock, and a sparse cover of stunted trees.



DATE: 19/01/2010
 PREPARED BY: G. Mesheau
 JN PROJECT NO.: 10050893

MARTIN MARIETTA MATERIALS - MULGRAVE QUARRY FINES STORAGE PROJECT

LAND CLASSIFICATION

FIGURE NO.: Figure 2



4.0 PUBLIC INVOLVEMENT

4.1 METHODS OF INVOLVEMENT

On July 14, 2009 a Project Information Bulletin (Appendix D) was distributed to landowners and some local businesses within approximately 1.0 km of the quarry. A total of 26 bulletins were deposited in mail boxes. The purpose of the bulletin was to advise local residents and businesses immediately adjacent to the existing quarry and proposed Project site (*i.e.*, those who are potentially most affected) and provide them with an opportunity to comment on the proposed undertaking. Martin Marietta also attended a Mulgrave Town Council meeting on September 8, 2009 to further explain the Project. The information presented at this meeting has been included in this report in Appendix D.

Information letters were also sent, on September 18, 2009, to the Confederacy of Mainland Mi'kmaq, the Native Council, the Mi'kmaq Rights Initiative, and the Union of Nova Scotia Indians, to encourage the submission of comments, concerns and questions regarding the Project (Appendix D).

4.2 STAKEHOLDER COMMENTS AND STEPS TAKEN TO ADDRESS ISSUES

On July 20, 2009 a call was received as a result of the distribution of the Public Information Bulletin from a family owning land adjacent to the proposed Project site. Their major concerns were related to property boundaries and potential buffers, whether or not they would experience any negative effects as a result of the Project, and they requested that the proponent hold a meeting to further explain the Project to the local landowners and residents. After the town council meeting was held on September 8, 2009, an article was posted in the Strait Area Reporter, on Wednesday September 16, 2009, which indicated that the presentation that the Proponent gave was effective at answering the public's questions and resolved their concerns regarding the potential for noise and dust effects as a result of increased blasting, which is not a part of the proposed Project (*i.e.*, it is for fines storage only).

To date, no comments have been received from the Confederacy of Mainland Mi'kmaq, the Native Council, the Mi'kmaq Rights Initiative, or the Union of Nova Scotia Indians.